

Claims

1. Method of movement estimation for a sequence of images including segmentation of a current video image into image blocks, movement estimation per image block in order to obtain a movement vector field for said current image, a stage of reassignment of a vector to a block by selecting one movement vector from among N predominant vectors, characterized in that the predominant vectors are the ones of the group of vectors belonging to the movement vector field of said current image and at least to the movement vector field of a preceding image, the vectors being scaled according to the temporal distance to which they correspond.

2. Method according to Claim 1, characterized in that, for a predominant vector, second-order regional maxima are detected so as not to be taken into account during the selection of the other predominant vectors.

3. Method according to Claim 1, characterized in that the predominant vectors are selected in each of the four directions.

4. Method according to Claim 1, characterized in that the selection of the reassigned vector is based on the value of the displaced frame difference (DFD).

5. Method according to Claim 4, characterized in that, if the DFDs associated with the N predominant vectors are greater than the DFD associated with the original vector, the zero vector is adopted.

6. Method according to Claim 4, characterized in that, if the DFDs associated with the N predominant vectors are greater than the weighted DFD associated with the original vector, the original vector is kept.

7. Method according to Claim 1, characterized in that the selection of the reassigned vector is based on the calculation of the activity (spatial gradient) in the inter-image difference block (current block -estimated block).

8. Method according to Claim 7, characterized in that, if the activities corresponding to the N predominant vectors are greater than the activity corresponding to the original vector, the zero vector is adopted.

5 9. Method according to Claim 7, characterized in that, if the activities corresponding to the N predominant vectors are greater than the weighted activity corresponding to the original vector, the original vector is kept.

10 10. Method according to Claim 4, characterized in that the components of the vectors used during the DFD calculations are the spatially filtered components.

11. Method according to Claim 7, characterized in that the components of the vectors used during the spatial-gradient calculations are the spatially filtered components.

15 12. Method according to Claim 1, characterized in that the vectors of the preceding images, in addition to being scaled, are weighted as a function of the temporal distance.

13. Method according to Claim 1, characterized in that, when a break in movement is detected, the vectors of the preceding images are not considered.

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